No. 74-1270

In the Supreme Court of the United States

OCTOBER TERM, 1975

RUSSELL TRAIN, ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY, ET AL., PETITIONERS,

v.

COLORADO PUBLIC INTEREST RESEARCH GROUP, INC., ET AL., RESPONDENTS.

BRIEF AMICUS CURIAE ON BEHALF OF BOSTON EDISON COMPANY, CAROLINA POWER & LIGHT COMPANY, CENTRAL MAINE POWER COMPANY, COMMONWEALTH EDISON COMPANY, THE CONNECTICUT LIGHT AND POWER COMPANY, CONSOLIDATED EDISON COMPANY OF NEW YORK, INC., THE DETROIT EDISON COMPANY, THE HARTFORD ELECTRIC LIGHT COMPANY, ILLINOIS POWER COMPANY, LOUISIANA POWER & LIGHT COMPANY, MAINE YANKEE ATOMIC POWER COMPANY, NEW ENGLAND POWER COMPANY, NIAGARA-MOHAWK POWER CORPORATION, NORTHEAST NUCLEAR ENERGY COMPANY, NORTHERN STATES POWER COMPANY, OMAHA PUBLIC POWER DISTRICT, POWER AUTHORITY OF THE STATE OF NEW YORK, PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, ROCHESTER GAS & ELECTRIC CORPORATION, SOUTHERN CALIFORNIA EDISON COMPANY, UNION ELECTRIC COMPANY, VERMONT YANKEE NUCLEAR POWER CORPORATION, WESTERN MASSACHUSETTS ELECTRIC COMPANY, WISCONSIN ELECTRIC POWER COMPANY AND YANKEE ATOMIC ELECTRIC COMPANY

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INTRODUCTION

Boston Edison Company, Carolina Power & Light Company, Central Maine Power Company, Commonwealth Edison Company, The Connecticut Light and Power Company, Consolidated Edison Company of New York, Inc., The Detroit Edison Company, The Hartford Electric Light Company, Illinois Power Company, Louisi-

ana Power & Light Company, Maine Yankee Atomic Power Company, New England Power Company, Niagara-Mohawk Power Corporation, Northeast Nuclear Energy Company, Northern States Power Company, Omaha Public Power District, Power Authority of the State of New York, Public Service Company of New Hampshire, Rochester Gas & Electric Corporation, Southern California Edison Company, Union Electric Company, Vermont Yankee Nuclear Power Corporation, Western Massachusetts Electric Company, Wisconsin Electric Power Company and Yankee Atomic Electric Company ("Utilities"), are filing this brief *amicus curiae* with the consent of both Petitioners and Respondents. Letters evidencing such consent have been filed with the Clerk of this Court.

The Court of Appeals for the Tenth Circuit has held that the Federal Water Pollution Control Act Amendments of 1972 ("FWPCA" or "Act"), 86 Stat. 816, 33 U.S.C. §§1251 *et seq.* (Supp. II, 1972), requires the Administrator of the Environmental Protection Agency ("EPA") to regulate liquid nuclear wastes from facilities such as nuclear power plants, notwithstanding comprehensive control of such wastes by the Nuclear Regulatory Commission ("NRC") pursuant to the Atomic Energy Act of 1954, as amended, 68 Stat. 919, 42 U.S.C. §§2011 *et seq.* (1970) (the "Atomic Energy Act").[1] *Colorado Public Interest Research Group* v. *Train*, 507 F.2d 743

[1]Pursuant to the Energy Reorganization Act of 1974, 88 Stat. 1233, 42 U.S.C.A. §§5801 *et. seq.* (Supp. Feb., 1975), the NRC succeeded to the regulatory functions of the Atomic Energy Commission ("AEC"). Accordingly, references to the NRC or to the activities of the NRC may apply to the AEC as well. However, specific references to the AEC are used when the context so requires.

(10th Cir. 1974). This decision is based on the Tenth Circuit's interpretation of Section 502(6) of the FWPCA, 33 U.S.C. §1362(6) (Supp. II, 1972), which includes the words "radioactive materials" in the definition of the term "pollutant."[2] This Court issued a Writ of Certiorari to the Tenth Circuit to review that decision on June 2, 1975.

Utilities believe that the opinion of the Tenth Circuit is erroneous and will, unless reversed by this Court, lead to duplicative and potentially disruptive regulation of nuclear power plants, to the detriment of national energy goals and in opposition to clearly expressed Congressional intent. Accordingly, Utilities support the position of the Petitioners herein, and urge this Court to reverse the decision of the Tenth Circuit.

INTEREST OF UTILITIES

Each of the Utilities holds an interest in one or more nuclear power plants for which construction permits or

[2]The full definition is as follows:

> The term 'pollutant' means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. This term does not mean (A) 'sewage from vessels' within the meaning of section 312 of this Act; or (B) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if such State determines that such injection or disposal will not result in the degradation of ground or surface water resources.

FWPCA Section 502(6), 86 Stat. 816, 33 U.S.C. §1362(6) (Supp. II, 1972).

operating licenses have been issued or applications are pending before the NRC.[3] Utilities are, therefore, heavily involved in providing electricity to their customers by means of nuclear energy and have spent billions of dollars and will be required to spend further billions of dollars pursuant to that commitment. They have a special interest here because the immediate effect of the Tenth Circuit opinion will be the severe disruption of the process for licensing these plants and of future service to their more than 17 million customers. Utilities, unlike EPA, have actual experience with the complexity of regulating nuclear wastes and with the burdens inherent in multi-layered regulation.

The opinion of the Tenth Circuit may seriously affect the continued operation and scheduled construction of nuclear power plants by imposing redundant and potentially conflicting regulation with respect to discharges of liquid nuclear wastes. Because of the sophisticated technology involved, such regulation requires in-depth consideration of all aspects of the design and operation of nuclear power plants. Indeed, since reducing liquid nuclear wastes generally increases nuclear wastes in solid form, which are also regulated by the NRC, overlapping regulation of liquid wastes pursuant to the FWPCA may conflict with NRC policies in related areas or prevent the design of nuclear power plants which meet requirements

[3]The number of customers served by Utilities, the percentage of Utilities' capacity served by nuclear power plants, the number and capacity of the nuclear facilities to which Utilities are committed, and the anticipated service dates of units presently uncompleted are set forth in Appendix A.

under both the FWPCA and the Atomic Energy Act. The delay in obtaining permits or permit renewals and other consequences to Utilities' operations which are threatened by the Tenth Circuit opinion are wholly inconsistent with the obligation of Utilities to serve their customers and with the declared national policy of conserving fossil fuel resources and developing energy sources not dependent upon foreign governments. The additional layers of regulation which will flow from the Tenth Circuit decision are inconsistent with the expressed intent of Congress and provide no benefits to the public to offset these social and economic costs.

SUMMARY OF ARGUMENT

Ironically, despite the fact that one of the objectives of the FWPCA is to reduce duplicative and overlapping regulation, the interpretation of that statute by the court below would have precisely that effect. It would sow confusion, stimulate litigation, inhibit industrial development, frustrate national energy policy and foster redundant regulation to an unprecedented degree. The decision of the Tenth Circuit ignores the consequences of its interpretation of the FWPCA on a vital component of the nation's plan for energy self-sufficiency, nuclear power plants. Such plants are extremely complex and costly industrial facilities, which take many years to construct. Nuclear power plants are presently subject to rigorous regulation by federal, state and local authorities of all aspects of their design, construction and operation. Until the decision of the Tenth Circuit, however, control of the use of source, by-product and special nuclear materials in

such power plants was confined to one federal agency, the NRC.[4]

At issue is whether exclusive regulation of the use and discharge in a liquid form of source, by-product, and special nuclear materials ("liquid nuclear wastes") from nuclear power plants and other production and utilization facilities is to be left with the NRC.[5] The Tenth Circuit says not, relying upon one phrase which appears in the FWPCA. In construing this one phrase (in FWPCA Section 502(6), *supra* note 2, which includes "radioactive materials" in the definition of "pollutants"), the Tenth Circuit has entirely disregarded the separate histories, aims and structures of the two statutes which it should have harmonized, the FWPCA and the Atomic Energy Act.

[4]The Atomic Energy Act defines the terms "byproduct material," "source material" and "special nuclear material" as follows:

> The term 'byproduct material' means any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material.
>
> The term 'source material' means (1) uranium, thorium, or any other material which is determined by the Commission pursuant to the provisions of section 61 to be source material; or (2) ores containing one or more of the foregoing materials, in such concentration as the Commission may by regulation determine from time to time.
>
> The term 'special nuclear material' means (1) plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing, but does not include source material.

Atomic Energy Act of 1954, 68 Stat. 919, as amended, Section 11(e), (z), (aa), 42 U.S.C. §2014 (e), (z), (aa) (1970).

[5]*Id.*, Section 11(v), (cc), 42 U.S.C. §2014 (v), (cc) (1970).

The NRC's exclusive regulation of radioactive materials used in nuclear power plants is the result of a carefully considered legislative plan which derives from the development of nuclear energy in World War II and subsequent federal development of nuclear energy for peacetime use. Congress, recognizing both the potential for harm to the public health and safety from unrestricted access to radioactive materials and the complexities inherent in regulating such substances, has consistently expressed its will that NRC regulation be comprehensive and free from conflicting or redundant regulation by any other governmental agency. That congressional purpose is found in the language of the Atomic Energy Act, subsequent enactments dealing with the regulatory role of the NRC, and the legislative history which preceded the passage of those statutes. The exclusivity of NRC control of radioactive materials used in nuclear power plants was confirmed in *Northern States Power Co.* v. *Minnesota*, 447 F.2d 1143 (8th Cir. 1971), *aff'd*, 405 U.S. 1035 (1972), where the Court of Appeals held that the Atomic Energy Act pre-empted state regulation of the very substances involved in this litigation, liquid nuclear wastes from nuclear power plants. Thus, until the decision of the court below, it was clear that NRC was not to share its jurisdiction with any other agency, federal or state.

The FWPCA proceeds on premises which are very different from those which underlie the Atomic Energy Act. Knowledge about pollution control equipment and the effect of pollution is disseminated among the various governmental levels and between governmental and non-governmental experts. The subject of regulation, water pollu-

tion, has been regulated by the states for many years and the gradually evolving federal involvement in the field has had as its purpose achieving certain objectives by relying upon rather than supplanting state regulation. Accordingly, among the legislative goals expressed in the FWPCA is large-scale participation by the states in regulating water pollution. To that end, state certification of compliance by industrial facilities with EPA-established effluent guidelines and state administration of a federally-mandated permit program are contemplated by the FWPCA. The Tenth Circuit failed to adequately analyze the FWPCA and its interplay with the Atomic Energy Act, as construed in *Northern States*. Instead, the court held simplistically that the Atomic Energy Act was "inconsistent" with, and hence subject to, the FWPCA. 507 F.2d at 748. Thus, the Tenth Circuit decision would be merely the precursor to additional litigation attempting to adjust the state regulatory role under the FWPCA with the prior limitation on state power in this area set forth in *Northern States*. Until this resolution occurs, nuclear power plant construction, operation and licensing would lag, all to the detriment of the national goal of energy self-sufficiency.

The court below dismissed the legislative history of the FWPCA as "inconclusive" and observed that use of legislative history as an aid to construction was inappropriate since the words "radioactive materials" in Section 502(6) of the FWPCA, 33 U.S.C. §1362(6) (Supp. II, 1972), have an "obvious meaning." 507 F.2d at 747. However, the so-called "plain meaning" rule of statutory con-

struction does not bar resort to legislative history in this case. Moreover, in view of the accommodation between the FWPCA and the Atomic Energy Act which is necessary, use of the legislative history is particularly important to resolve the potential clash between two federal statutes and to avoid the plainly unreasonable and bizarre results which flow from the Tenth Circuit's decision. Had the court reviewed the legislative history of the FWPCA, the express Congressional purpose to maintain exclusive NRC jurisdiction over liquid nuclear wastes from nuclear power plants would have been apparent.

Finally, the Tenth Circuit failed to give proper weight to EPA's interpretation of its powers under the FWPCA. EPA has concluded that it lacks statutory authority to regulate liquid nuclear wastes from nuclear power plants. This administrative interpretation is in accord with a long-standing division of responsibility between EPA and NRC, whereby EPA establishes general standards for radioactivity in the environment and NRC promulgates specific regulations to assure that those standards are met by nuclear power plants. Thus, the present division of responsibility between EPA and NRC provides comprehensive, unified control of radioactive discharges. Superimposing the regulatory scheme contemplated by the FWPCA on existing NRC regulation would add nothing to the protection of the public health and safety or the environment, would be contrary to the express mandate of the FWPCA to eliminate duplicative regulation, and would be achieved only at the risk of disrupting the national goal of energy self-sufficiency.

ARGUMENT

I.

The Attainment of Major National Goals Requires Unified Regulation of the Radiological Aspects of Nuclear Power Plants.

The generation of electricity by means of nuclear power has progressed over the past two decades from experimental status to wide-scale commercial application and a corresponding vital role in the nation's energy supply. At the end of 1973, nuclear power plants represented about 4.7 per cent of the nation's generating capacity.[6] By 1985, the Federal Energy Administration estimates that electricity generated by nuclear power plants will account for 30 per cent of total generation.[7] This energy is expected to be derived from plants representing 22 to 24 per cent of total generating capacity.[8] In his State of the Union message, President Ford described a strategy for energy self-sufficiency within the next ten years which rests in part on placing 200 new nuclear power plants into operation.[9]

A nuclear power plant is an extremely costly and complex industrial facility. A new two-unit nuclear power station, having a typical generating capacity of about 2,000,000 kilowatts, costs in excess of $1 billion.[10] Such

[6]Federal Energy Admin., Project Independence Report 119, 127 (1974).

[7]*Id.* at 30.

[8]*Id.* at 127.

[9]121 Cong. Rec. H137 (daily ed. Jan. 15, 1975); *see also* Statement of Hon. John A. Hill, Deputy Adm'r., Federal Energy Admin., Before the Subcomm. on Energy and the Environment of the House Comm. on Interior and Insular Affairs, June 2, 1975.

[10]*See, e.g.*, Atomic Energy Comm'n, The Nuclear Industry: 1973, WASH-1174-73, Table 1-2, at 6 (1974); Nuclear Industry, Vol. 22, Jan., 1975, at 27.

costs are major components of a utility's construction budget. Delay in the scheduled operation of a nuclear power plant can be most serious. For example, one year's delay in the completion of a 2,000,000 kilowatt power station can have one or more of the following consequences:

(1) failure to meet customers' load requirements;
(2) escalated construction costs;
(3) costs of $40,000,000 to $175,000,000 in recent dollars or $50,000,000 to $280,000,000 in 1980 dollars due to the higher fuel cost of coal- or oil-fueled plants;
(4) consumption of as much as 20,000,000 barrels of oil if the capacity is replaced by generation at oil-fired units.[11]

A nuclear power plant typically consists of three major components: a nuclear steam supply system which produces steam by means of the heat resulting from the fission process; a turbine-generator which converts the steam into electricity; and a system for dissipating the waste

[11]Atomic Energy Comm'n, Comparative Risk-Cost-Benefit Study of Alternative Sources of Electrical Energy, WASH-1224, Table 1.1, at 1-7, and Table 5.4, at 5-7 (1974). Table 1.1 indicates that one unit having a capacity of 1,000 megawatts (1,000,000 kilowatts) operating at a 75 per cent capacity factor would produce 6,570,000,000 kilowatt hours per year, which would require 10,000,000 barrels of oil. The Table also contains projections of 1980 fuel costs of 6.0 mils per kilowatt hour for nuclear plants, 9.8 mils per kilowatt hour for coal-fueled plants and 27.4 mils per kilowatt hour for oil-fired plants. *See* Federal Energy Admin., Project Independence Report 286 (1974), which shows recent fuel costs of 2.50 mils per kilowatt hour for nuclear fuel, 5.56 for coal and 15.83 for oil. *See also* Remarks of Hon. Frank G. Zarb, Adm'r, Federal Energy Admin., Before the Commonwealth Club of California, S-75-231, July 11, 1975.

heat produced by the above process.[12] Quite apart from the special regulatory measures which must be taken because of the dangers of unconfined radioactivity associated with the operation of such plants, their size, complexity and interaction with the environment have brought into play a wide variety of federal, state and local regulation. Construction and operation of a nuclear power plant may require as many as 15 to 20 different permits.[13] These permits cover a wide range including, for example, NRC construction permits, certificates of public convenience and necessity from state public utilities commissions, water use permits from state pollution abatement agencies, and highway permits from county governments for the transportation of heavy equipment over local roads. While the scope of regulation is very broad, there has been no overlapping jurisdiction with respect to control of source, by-product and special nuclear materials contained in or released from nuclear power plants.

Nuclear power plants have a unique attribute which sets them apart from every other industrial facility, in terms of the need for comprehensive regulation of their operations. The operation of a nuclear power plant involves the control of large quantities of potentially hazardous and extremely persistent substances, the nuclear wastes and by-products which are created during the operation of the facility. The power plant must, therefore, be designed, constructed and operated so that

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[12] *See* Atomic Energy Comm'n, The Safety of Nuclear Power Reactors (Light Water-Cooled) and Related Facilities, WASH-1250, at 1-1 (1973).

[13] *See, e.g.*, Atomic Energy Comm'n, Final Environmental Statement, Braidwood Station, Docket Nos. STN 50-456 and STN 50-457, Table 1.1 (1974).

those individuals operating the plant are not exposed to harmful quantities of radioactivity; so that any low-level nuclear wastes released to the environment during routine operation do not jeopardize public health; and so that, in the unlikely event of an accident, the effects on the public of any release of nuclear material are mitigated. Regulatory control of the radiological aspects of the operation of nuclear power plants first involves establishing permissible exposure limits to power plant personnel and the public from radioactivity which may be released during normal operation or under accident conditions in gaseous or liquid form. Once exposure limits have been determined, design parameters for the nuclear power plant and its nuclear fuel are established which, in the judgment of the regulatory authority will control emissions of nuclear wastes so that the exposure limits are not exceeded if construction proceeds in accordance with the approved design. Different types of nuclear power plants in use today have operating characteristics which cause variations in the types of radionuclides released in the nuclear wastes, the form of such release (gaseous, liquid or solid) and the rate of the release. The manner in which a nuclear power plant is operated has an effect on the type and quantity of such releases as well.

In short, effective regulation of discharges of nuclear wastes from nuclear power plants from the standpoint of protecting the health and safety of the public requires an intimate knowledge of all aspects of the design, construction and operation of a nuclear power plant. Further, the nation's increasing reliance on electricity generated by nuclear power, together with the huge sums of money invested in or committed to nuclear power plants by pub-

lic utilities, demand that regulation of nuclear power plants be consistent, unified and timely, so that the impact of such regulation can be factored into the decision to build a nuclear power plant in the first instance and that construction and operation will proceed in an orderly fashion. As we show in the next section of the brief, Congress has responded to this perceived need for unified regulation of all nuclear materials, including liquid nuclear wastes. Since 1946, Congress has adhered to a consistent legislative strategy for regulating nuclear materials, which confines such regulation to the NRC.

II.

The Atomic Energy Act Contemplates Comprehensive Regulation by the NRC of All Source, By-Product and Special Nuclear Material in Liquid Nuclear Wastes.

A. The NRC has been granted an exclusive Congressional mandate to regulate all radiological aspects of nuclear power plants.

A review of the evolution of NRC's regulatory authority demonstrates the unique and exclusive nature of its charter. Congress began its regulation of atomic energy with the passage of the Atomic Energy Act of 1946, 60 Stat. 755. That Act provided that the Atomic Energy Commission would own all nuclear facilities and the special nuclear material produced by or used in them. The federal monopoly over atomic energy materials and facilities for non-military activities derived in part from the costly capital investment required for the development of nuclear technology, and in part from the widespread

recognition that nuclear materials were highly dangerous and required the most careful control.[14]

This legislative framework was reviewed and thoroughly revised by Congress in 1954 to provide for the anticipated wide-scale construction and operation of nuclear power plants. Atomic Energy Act of 1954, 68 Stat. 919, 42 U.S.C. §§2011 *et seq.* (1970). Congress eliminated AEC's exclusive ownership of nuclear facilities, but retained ultimate AEC control over nuclear development to ensure that "greater private participation in power and development need not bring with it attendant hazards to the health and safety of the American people." S. Rep. No. 1699, 83d Cong., 2d Sess. 3 (1954); H. R. Rep. No. 2181, 83 Cong., 2d Sess. 3 (1954). The arrangement settled upon by Congress was a program of private ownership of nuclear facilities under license by the Commission. Thus, private interests were permitted for the first time to own and operate nuclear production and utilization facilities, as licensed by the AEC. Atomic Energy Act of 1954, 68 Stat. 919, Section 103, 42 U.S.C. §2133 (1970). In other words, the principle of federal ownership of nuclear facilities and special nuclear materials was altered only to the extent of allowing private ownership under license, and the principle of unified federal control over all aspects of atomic energy was to continue

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[14]The Senate Report that accompanies the 1946 legislation emphasized that an absolute government monopoly of production of fissionable material was justified, in part, by the fact that such production "is attended by serious hazards to public health and safety. The responsibility for minimizing these hazards is clearly a governmental function." S. Rep. No. 1211, 79th Cong., 2d Sess. 14 (1946).

through very rigorous licensing procedures. *See Id.*, Section 182, 42 U.S.C. §2232 (1970).[15]

In enacting the Atomic Energy Act of 1954, Congress declared that "[t]he processing and utilization of source, byproduct, and special nuclear material . . . must be regulated in the national interest." Atomic Energy Act of 1954, 68 Stat. 919, Section 2(d), 42 U.S.C. §2012(d) (1970). It further stated that "regulation by the United States of the production and utilization of atomic energy and of the facilities used in connection therewith is necessary in the national interest to assure the common defense and security and to protect the health and safety of the public." *Id.*, Section 2(e), 42 U.S.C. §2012(e) (1970). The Act authorized the AEC to "establish by rule, regulation, or order, such standards and instructions to govern the possession and use of special nuclear material, source material, and byproduct material as the Commission may deem necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or property." *Id.*, Section 161(b), 42 U.S.C. §2201(b) (1970). As described by one court of appeals, the Atomic Energy Act of 1954 established "a regulatory scheme which is virtually unique in the degree to which broad responsibility is reposed in the administering agency . . . ." *Siegel* v. *Atomic Energy Comm'n*, 400 F.2d 778, 783 (D.C. Cir. 1968).

[15]The licensing procedure under the 1954 Act as interpreted by the AEC was reviewed and approved by this Court in *Power Reactor Dev. Co.* v. *International Union of Elec., Radio & Machine Workers*, 367 U.S. 396 (1961). The Court there found that the AEC's responsibility for safeguarding public health and safety was to be exercised through a step-by-step procedure, in which a construction permit would first be issued, based on AEC's finding pursuant to 10 C.F.R. §50.35 of "reasonable assurance that a facility . . . can be constructed and operated . . . without undue risk to the health and safety of the public . . ." *Id.* at 406. Thereafter, an operating license could be issued based on the AEC's finding pursuant to Section 182(a) of the Act, 42 U.S.C. §2232(a) (1970), that the facility "will 'provide adequate protection to the health and safety of the public.' " *Id.* at 405-06. The multiple safeguards of this step-by-step procedure were approved as meeting the "high safety standards imposed by" Congress. *Id.* at 415. NRC's administrative procedures have on several subsequent occasions been found to satisfy constitutional and statutory requirements. *E.g., Union of Concerned Scientists* v. *Atomic Energy Comm'n*, 499 F.2d 1069 (D.C. Cir. 1974).

Congress evidenced its particular concern for continuing oversight of the AEC's activities by establishing the Joint Committee on Atomic Energy, which has taken an active role in keeping abreast of AEC activities. Atomic Energy Act of 1954, 68 Stat. 919, Section 201, 42 U.S.C. §2251 (1970). This Court has described the Joint Committee as a body with a "peculiar responsibility and place . . . in the statutory scheme," since it closely oversees the AEC's activities in the atomic energy field. *Power Reactor Development Co.* v. *International Union of Elec., Radio & Machine Workers*, 367 U.S. 396, 409 (1961). Thus, the Joint Committee on Atomic Energy has uniformly emphasized the AEC's responsibility to ensure that nuclear power plants and other production and utilization facilities are developed and operated consistently with radiological safety.[16] Pursuant to its statutory mandate,

[16]*See, e.g.*, Staff of Jt. Comm. on Atomic Energy, A Study of Atomic Energy Commission Procedures and Organization and the Licensing of Reactor Facilities, 85th Cong., 1st Sess. 4 (Comm. Print 1957):

> The special problem of safety in the atomic field is the consequence of the hazards, created by potentially harmful radiation attendant upon atomic energy operations.

the Joint Committee has held numerous hearings to investigate the AEC's regulatory activities, and from time to time has issued reports and studies that have recommended changes in AEC procedures and policies. The Joint Committee has examined AEC and NRC regulation of nuclear power plants in detail to be certain that such plants are licensed and operated in accordance with radiological safety standards.[17]

On several occasions since the 1954 enactment, Congress has amended the Atomic Energy Act without, however, abandoning the principle of unified and comprehensive control in a single federal agency. Thus, in 1959, provisions were approved for agreements whereby the AEC would transfer to qualifying states certain regulatory authority over by-product, source and special nuclear materials within their boundaries in quantities not sufficient to form a critical mass. Atomic Energy Act of 1954, as amended, Section 274, 73 Stat. 688, 42 U.S.C. §2021

[17] *See, e.g.*, Hearings on the Environmental Effects of Producing Electric Power Before the Jt. Comm. on Atomic Energy, 91st Cong., 1 Sess., pts. 1 and 2 (Vol. I and II) (1969); Hearings on AEC Licensing Procedure and Related Legislation Before the Subcomm. on Legislation of the Jt. Comm. on Atomic Energy, 92d Cong., 1st Sess., pts. 1–4 (1971); Hearings on Nuclear Power Plant Siting and Licensing Before the Jt. Comm. on Atomic Energy, 93d Cong., 2d Sess. (Vol. I and II) (1974); Hearings on Nuclear Reactor Safety Before the Jt. Comm. on Atomic Energy, 93d Cong., 1st Sess., pts. 1 and 2 (Vol. I and II) (1973). Most recently, the Joint Committee on Atomic Energy has emphasized that "NRC's regulation must be in the overall public interest, including public health and safety, the environment, and relevant social, economic, and common-defense and security factors." The Committee recommended that NRC's appropriations be increased so that it could expand its regulatory activities. S. Rep. No. 94-260, 94th Cong., 1st Sess. 3 (June 4, 1975).

(1970).[18] Significantly, however, Section 274 directs the Commission to retain authority and responsibility for the regulation of the construction and operation of production or utilization facilities. Congress, in other words, expressly precluded the states from entering this field. AEC control over such facilities including nuclear power plants necessarily includes control over the discharge of nuclear wastes from such facilities as an incident to their operation. In analyzing this Section in hearings before the Joint Committee, Mr. Robert Lowenstein, speaking on behalf of the Office of the General Counsel of the AEC, explained:

> Coming to the question you asked before, Mr. Ramey [Executive Director, Joint Committee], the purpose of this provision is to retain under Commission regulatory control the operation of the reactor. We did not feel that we could begin to cut up that into pieces, so to speak. The discharge of effluent from the reactor involves many questions relating to the design and construction and operating procedures.

Hearings on Atomic Energy—Cooperation with the States Before the Jt. Comm. on Atomic Energy, 86th Cong., 1st Sess. 306 (1959). The Joint Committee's reports to the House and Senate which accompanied this legislation were unequivocal. They stated that:

> Licensing and regulation of more dangerous activities —such as nuclear reactors—will remain the exclusive responsibility of the Commission. . . . *It is not intended to leave any room for the exercise of dual or concurrent jurisdiction.* . . . The intent is to have the material regulated

[18] The State must show the AEC that it has a regulatory program that is adequate to protect the public health and safety and is compatible with the AEC's regulatory program for such materials. *Id.*

and licensed either by the Commission, or by the State and local governments, but not by both.

H.R. Rep. No. 1125, 86th Cong., 1st Sess. 9 (1959); S. Rep. No. 870, 86th Cong., 1st Sess. 9 (1959) (emphasis added).

The judiciary has previously had occasion to consider the role of the Federal Government in regulating nuclear material. In *Northern States Power Co.* v. *Minnesota*, 447 F.2d 1143 (8th Cir. 1971), *aff'd*, 405 U.S. 1035 (1972), the Eighth Circuit considered whether the Atomic Energy Act pre-empted concurrent state control of matters within the scope of the federal legislation. There, as here, the issue was whether responsibility for regulating discharges of liquid nuclear wastes from nuclear power plants was to be shared by the AEC with another regulatory body. After reviewing the history of the Atomic Energy Act and the consistent Congressional purpose to centralize all regulation of source, by-product and special nuclear material in the AEC, the Court of Appeals held that federal regulation was exclusive and pre-empted state regulation of those substances. The court observed that "[o]nly through the application and enforcement of uniform standards promulgated by a national agency" could the objectives of the Atomic Energy Act, including the protection of public health and safety, be achieved. 447 F.2d at 1154.

In its most recent review of the statutory framework, occurring subsequent to the passage of the FWPCA, Congress apportioned the functions of the AEC between two new closely-related agencies, the Energy Research and Development Administration and the NRC. Energy Reorganization Act of 1974, 88 Stat. 1233, 42 U.S.C.A. §5801 *et seq.* (Supp. Feb., 1975). Not only was NRC given

all the licensing and regulatory functions previously possessed and exercised by the AEC, but Congress intended by this action to "up-grade the regulation of nuclear power." S. Rep. No. 93-980, 93d Cong., 2d Sess. 1 (1974). The establishment of the NRC indicated Congress' continuing recognition of the importance of the AEC's regulatory duties, and also reemphasized Congress' concern that there be efficient regulation of nuclear facilities during the energy crisis.

B. The NRC's regulation of liquid nuclear wastes from nuclear power plants is inextricably intertwined with its regulation of other radiological aspects of such plants.

Pursuant to its congressional mandate, the NRC has regulated liquid nuclear wastes from nuclear power plants since the Atomic Energy Act of 1954 was enacted. In 1957, prior to operation of the first commercial nuclear power plant, the AEC promulgated regulations which established limits upon additions of radioactivity from normal operation of nuclear power plants to the environment. 22 Fed. Reg. 548 (1957). Those regulations, as amended most recently in 1964 (29 Fed. Reg. 14434), provide quantitative limits, measured by concentrations of various radionuclides in air and water in excess of natural background radiation. 10 C.F.R. §20.106 (1974).

The AEC implemented these regulations with specific release limits in licenses, and in practice required concentrations to be maintained well below the limits imposed by the regulations. 36 Fed. Reg. 11113 (1971). In 1970, the AEC supplemented its regulations in 10 C.F.R. Part 20 by adding a new regulation, 10 C.F.R. §50.34a, which required applicants for construction permits and operating licenses for nuclear power plants to

identify the means to be employed to keep levels of radioactivity in liquid and gaseous effluents "as low as practicable." 35 Fed. Reg. 18387 (1970). Shortly thereafter, the AEC proposed an Appendix I to 10 C.F.R. Part 50, which contained numerical guides to meet the "as low as practicable" criterion of §50.34a. 36 Fed. Reg. 11113 (1971). Similar guides were generally employed as "interim guides" in the licensing of nuclear power plants during the evaluation of the regulations.[19] After an extensive rulemaking proceeding, NRC adopted numerical limitations on both gaseous and liquid nuclear wastes from nuclear power plants, effective June 4, 1975. 40 Fed. Reg. 19439 (May 5, 1975). The new limitations require, for example, for liquid nuclear wastes:

> The calculated annual total quantity of all radioactive material above background to be released from each light-water-cooled nuclear power reactor to unrestricted areas will not result in an estimated annual dose or dose commitment from liquid effluents for any individual in an unrestricted area from all pathways of exposure in excess of 3 millirems of the total body or 10 millirems to any organ.

10 C.F.R. Pt. 50, App. I, §II.A, at 40 Fed. Reg. at 19442 (1975). Detailed calculations are necessary to demonstrate that a plant design will be adequate to prevent violation of this regulation. Underlying these calculations are extensive analytical models (some of which utilize computers), which are based on complex engineering assumptions regarding such matters as power plant capacity factors, releases of various radionuclides in liquid effluents and efficiency factors for various types of filters and other clean-up equipment.[20]

[19] *See, e.g.*, Atomic Energy Comm'n, Final Environmental Statement, Proposed Rulemaking Action: Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion "As Low As Practicable" for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents, WASH-1258 (hereinafter, "WASH-1258"), Vol. 1, at 9-24 (1973).

These discharge limitations are part of a package of regulations. The NRC has also imposed limitations on the radiation exposure for individuals working within the nuclear power plant. 10 C.F.R. §20.101 (1974). Similarly, 10 C.F.R. §100.11 (1974) establishes design basis limits on general population exposure to radiation from all sources, following a "major accident." Finally, in evaluating the environmental effects of the operation of a nuclear power plant pursuant to its responsibilities under the National Environmental Policy Act ("NEPA"), 83 Stat. 852, 42 U.S.C. §§4321 *et seq.* (1970), the NRC evaluates radioactive releases during normal operation and during postulated accident conditions. For example, one of the accidents considered is the "Radwaste System Failure" in which there are assumptions made concerning the failure of storage tanks holding radioactive liquid wastes and its consequent release to the environment.[21] In all of these areas, the regulatory approach has been to concentrate on the effect on public health and safety from all radiation exposures, regardless of the form in which the radiation is released.

[20] A description of such calculations and the engineering assumptions and their bases is found in WASH-1258, Vol. 2.

[21] *See* Nuclear Regulatory Comm'n, Regulatory Guide 4.2, Preparation of Environmental Reports for Nuclear Power Stations, App. 5, at 4.2-74 (Rev. 1, Jan., 1975).

The foregoing regulations are an integral portion of an exceedingly comprehensive set of regulations, regulatory guides, license limitations and technical specifications appended to operating licenses which control all aspects of the design, construction and operation of nuclear power plants. Accordingly, applicants for construction permits and operating licenses are required to present detailed applications which describe in detail the design and operation of the power plant during normal operation and postulated accidents. 10 C.F.R. §50.34 (1974); 10 C.F.R. Pt. 50, App. A (1974). The NRC's primary concern is the protection of the public health and safety from the perils associated with exposure to toxic levels of radioactivity. The NRC's approach to its regulatory responsibilities in this regard has been described as the "defense-in-depth" concept. *Nader* v. *Nuclear Regulatory Comm'n*, 513 F.2d 1045, 1047 n. 7 (D.C. Cir. 1975).

To implement the defense-in-depth concept, regulations establish design criteria for all safety-related equipment. 10 C.F.R. Pt. 50, App. A (1974). Redundancy and multiplicity of safeguards equipment for preventing the release of radioactivity following postulated accidents is required. *E.g.*, 10 C.F.R. Pt. 50, App. A, Criterion 35 (1974); 10 C.F.R. Pt. 50, App. K, §D.1, at 39 Fed. Reg. 1003 (1974). The postulated accidents themselves are based on worst-case assumptions. 10 C.F.R. Pt. 50, App. K, §B.1, at 39 Fed. Reg. 1003 (1974). Further, the NRC requires detailed analyses of each site for a nuclear power plant so that the natural and man-made phenomena which the plant must withstand are fully understood. *E.g.*, *In the Matter of Commonwealth Edison Co.* (*Zion Station, Units 1 and 2*), in Atomic Energy Comm'n, Regulatory

Adjudicatory Issuances 73-10 (hereinafter, "RAI 73-10"), at 887-91 (Nov., 1973). Such matters as the seismology, hydrology and meteorology of each site are carefully explored so that there is assurance that the plant can be safely shut down during the most severe natural phenomena and so that the dispersion of radioactive materials during normal operation and following postulated accidents can be predicted. *See, e.g., In the Matter of Florida Power & Light Co.* (*St. Lucie Nuclear Power Plant Unit No. 2*), in Nuclear Regulatory Comm'n Issuances 75-2, at 101 (Feb., 1975). Quality Assurance Programs, pursuant to which each licensee monitors the quality control of all safety-related features of the design, construction and operation of a nuclear power plant, are an integral part of the defense-in-depth concept. *See* 10 C.F.R. Pt. 50, App. B (1974). Once a plant begins operating, detailed technical specifications to the licenses issued by the Commission control the power plant's operation. RAI 73-10 at 884-87. The NRC has power to impose various sanctions including civil penalties for violations of its regulations and has not hesitated to do so. *See, e.g.*, 39 Fed. Reg. 38017 (1974); New York Times, July 26, 1975, at 27, col. 7; Nucleonics Week, Vol. 15, Dec. 19, 1974, at 8.

Thus, it is plain that control of discharges of liquid nuclear wastes is an integral portion of the NRC's comprehensive regulatory structure for nuclear power plants. As the Eighth Circuit observed in *Northern States*, "regulation of the radioactive effluents discharged from a nuclear power plant is inextricably intertwined with the planning, construction and entire operation of the facility." 447 F.2d at 1153. The Tenth Circuit declined to consider the history of regulation of nuclear power plants

pursuant to the Atomic Energy Act, holding that the inclusion of the words "radioactive materials" in one section of the FWPCA was a self-contained, dispositive expression of Congressional intent to subject discharges of liquid nuclear wastes from nuclear power plants to regulation under that Act. 507 F.2d at 747. As we show in the pages that follow, the regulatory role envisioned by FWPCA for EPA and each state is wholly at odds with comprehensive, unified regulation of nuclear power plants.

III.

Regulation of Liquid Nuclear Wastes Pursuant to the FWPCA Would Not Only Duplicate Existing Federal Regulation, But Would Threaten To Fragment Such Regulation As Well.

A. Implementation of the Tenth Circuit's decision would either preclude state participation in administering the FWPCA or subject the regulation of nuclear power plants to the vagaries of state administration.

The decision of the Tenth Circuit is based on a serious misapprehension of the regulatory scheme established by the FWPCA. The Court of Appeals assumed that its holding will lead to regulation of liquid nuclear wastes by EPA. Thus, the opinion asserts that the "EPA Administrator was generally charged with carrying out the intent behind the 1972 Amendments," 507 F.2d at 747, and that the "EPA Administrator in considering a request to . . . discharge pollutants is subject to the various requirements and limitations provided for in the Act. . . ." *Id.* If the FWPCA simply contemplated regulation by EPA of

liquid nuclear wastes, the resulting duplication of the NRC's regulatory program would be a wasteful and unnecessary burden. However, the actual problem created by the Tenth Circuit's interpretation of the FWPCA is even more severe.

The FWPCA, in its "Declaration of Goals and Policy" explicitly recognizes the primary role of the states in administering that Act:

> It is the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this Act . . . .

FWPCA Section 101(b), 86 Stat. 816, 33 U.S.C. §1251(b) (Supp. II, 1972). This policy is given full expression in other provisions of the Act. The essential regulatory structure of the FWPCA applicable to industrial facilities involves the issuance by EPA of "effluent guidelines" under Section 304(b), which provide the basis for "effluent limitations" under Section 301(b), and of new source "performance standards" under Section 306. FWPCA Sections 301(b), 304(b), 306, 86 Stat. 816, 33 U.S.C. §§1311(b), 1314(b), 1316 (Supp. II, 1972). The states may participate in these and other FWPCA requirements in two phases. First, when an industrial facility such as a power plant requires a federal license or permit, the state in which the facility is located may grant or deny "certification" that any discharge from the facility will comply with applicable FWPCA requirements. FWPCA Section 401(a)(1), 86 Stat. 816, 33 U.S.C. §1341(a)(1)(Supp. II, 1972).

Certification, unless waived by the certifying state, is a prerequisite to the issuance of any of the several federal permits or licenses required for the facility. *Id.* Moreover, the certification process is not merely an objective calculation of compliance by a given discharge with these requirements, but provides the opportunity, in effect, for ad hoc rulemaking by the state to assure such compliance. Thus, the certification may specify effluent and other limitations, including design features and operating restrictions which, in the judgment of the state, will be necessary in order to bring the anticipated discharges into compliance with the applicable standards. FWPCA Section 401(d), 86 Stat. 816, 33 U.S.C. §1341(d) (Supp. II, 1972).

The second phase of state participation consists of administering EPA-approved permit programs established under state law. FWPCA Section 402(b), 86 Stat. 816, 33 U.S.C. §1342(b) (Supp. II, 1972). Under this phase, state discretion is substantially enhanced since the states retain their certification functions and assume responsibility for issuance, enforcement and termination of permits under Section 402(b) for discharges of liquid wastes within the state. *Id.* To date, twenty-four states, including four states who participated as *amicus curiae* below, have received such authority under Section 402(b).

While this administrative structure contemplates that the states will maintain much of their traditional powers with respect to pollution sources within their boundaries, no provision of the FWPCA empowers the states to regulate liquid nuclear wastes from nuclear power plants, which has always been an exclusive federal responsibility.

In *Northern States*, which this Court affirmed, the Eighth Circuit held that the Federal government, through the AEC, had "exclusive authority . . . to regulate the construction and operation of nuclear power plants, which necessarily includes regulation of the levels of radioactive effluent discharged from the plant". 447 F.2d at 1154. Thus, any authority the states would otherwise have had under the Tenth Amendment to regulate such radioactive effluents was eliminated by passage of the Atomic Energy Act. Section 510 of the FWPCA, 33 U.S.C. §1370 (Supp. II, 1972), which addresses the authority of the states to regulate pollutants, provides that "nothing in *this Act* shall preclude or deny the right of any State . . . to adopt or enforce . . . any standard or limitation respecting discharges of pollutants . . ." (emphasis added). That provision does not, however, confer authority denied the state under *another* federal statute. Moreover, an attempt was made to amend Section 510 to restore the state's power over nuclear wastes which had been removed by the Atomic Energy Act. That amendment was soundly defeated.[22] The FWPCA does not give the states authority

[22]The debates on this amendment and on the conference report demonstrate that Congress was aware of the *Northern States* decision and did not intend to overrule it in passing the FWPCA. *See* pages 45 and 46, *infra*. Where Congress intended to overrule judicial interpretations of pre-existing statutes it did so expressly, as in the case of Section 511(c) of the FWPCA, 33 U.S.C. §1371(c) (Supp. II, 1972), which explicitly overruled, in part, the decision of the District of Columbia Circuit in *Calvert Cliffs' Coord. Comm., Inc.* v. *Atomic Energy Comm'n*, 449 F.2d 1109 (D.C. Cir. 1971). *See* page 37, *infra*. Thus, this situation constitutes a compelling case for application of the principle that "repeals by implication are disfavored." *Administrator, Federal Aviation Admin.* v. *Robertson*, 43 U.S.L.W. 4833, 4837 (June 24, 1975).

to regulate discharges of nuclear wastes from nuclear power plants and, hence, if the FWPCA requires regulation of liquid nuclear wastes, such regulation must be conducted entirely by EPA.

However, the regulatory procedures of the FWPCA do not contemplate that EPA will conduct a permit program with respect to one pollutant and provide for state administration of a permit program for all other pollutants. If the decision of the Tenth Circuit were affirmed, EPA would be faced with an impossible task in developing a regulatory structure which is in accord with both the requirements of the FWPCA and the *Northern States* decision. Thus, the decision of the Tenth Circuit would become the first step in laborious and time consuming litigation construing the provisions of the FWPCA and the Atomic Energy Act. Ultimately, this Court would again be called upon to resolve the resulting problems of federal-state relationships.

To exemplify the dilemmas under the FWPCA which flow from declaring liquid nuclear wastes a "pollutant" which must be regulated by EPA, one need only consider whether EPA can approve any state permit program under Section 402(b) of the FWPCA, 33 U.S.C. §1342(b) (Supp. II, 1972). Under the permit program established by that Section, the state must "submit a statement from the attorney general . . . that the laws of such State . . . provide adequate authority to carry out the described program." Moreover, the Administrator cannot approve the state permit program if he determines that "adequate authority does not exist . . . [t]o issue permits which . . . apply, and insure compliance with any applicable re-

quirements of Sections 301, 302, 306, 307 and 403" of the Act. FWPCA Section 402(b), 86 Stat. 816, 33 U.S.C. §1342(b) (Supp. II, 1972). Thus, on the face of Section 402(b) it would appear that EPA could not approve such programs since, under *Northern States*, no state can have "adequate authority" to regulate liquid nuclear wastes. In other words, the Tenth Circuit's literal interpretation of Section 502(6) of the FWPCA, 33 U.S.C. §1362(6) (Supp. II, 1972), could produce an absurd result since it could render Section 402(b) a nullity. This would frustrate completely the congressional intent that the states assume responsibility for regulating individual discharges within their borders."

It is, of course, conceivable that, faced with the emasculation of Section 402(b) of the FWPCA, EPA or a court would attempt to curtail, without clearly rejecting, the *Northern States* holding of federal pre-emption by deciding that state implementation of EPA's effluent guidelines was permissible.[24] EPA would then proceed to issue effluent guidelines for discharges of liquid nuclear wastes and state participation in the regulatory process would begin.

However, in administering the EPA's effluent guidelines for liquid nuclear wastes, it is likely that the states would tinker with some of the underlying assumptions regarding design, construction and operation of the power

[23]This Court has recognized that a "restricted" interpretation of statutory terms may be adopted "where acceptance of [the literal] meaning would lead to absurd results or would thwart the obvious purpose of the statute." *Helvering* v. *Hammel*, 311 U.S. 504, 510-11 (1940) (citations omitted). EPA's interpretation of Section 502(6) would avoid such results and would assure the congressional intent reflected in Section 402(b) is not thwarted.

[24]*But see* note 22, *supra*.

plant and its fuel. Since evaluation of whether these discharges comply is not necessarily based on past operating experience but is prospective, assumptions regarding performance of fuel, water chemistry, efficiency of clean-up systems and operational modes for the power plant itself are necessary calculational bases. Given the highly sophisticated nature of these assumptions and calculations, it is inevitable that there would be confusion and variation in state certification of compliance under Section 401 of the FWPCA, 33 U.S.C. §1341 (Supp. II, 1972), and permit program administration under Section 402 of the FWPCA, 33 U.S.C. §1342 (Supp. II, 1972).[25] Accordingly, even

[25]Such regulation requires both knowledge of the properties of the discharges themselves and detailed understanding of the interplay of all aspects of the design, construction and operation of the nuclear reactor and its fuel. The nuclear wastes ultimately emitted are derived from the fission of uranium and plutonium atoms in the multitudes of fuel rods in the reactor core and the irradiation of the cooling water and impurities in the cooling water by neutrons released in the fission process. *See* J. Wills, Nuclear Power Plant Technology 196 (1967). These processes result in the formation of a wide variety of radionuclides which have different chemical and physical characteristics such as the rate of decay, the type and energy level of radiation emitted and behavior in plant systems. *See* S. Glasstone, Principles of Nuclear Reactor Engineering 117-20 (1st ed. 1955). WASH-1258, *supra* note 18, Vol. 2, at A-3 through A-13 lists the following as among the principal parameters to be used in calculating the quantities of nuclear wastes which are likely to be discharged from a nuclear power plant: (1) thermal power level; (2) plant capacity factor; (3) fraction of fuel releasing radioactivity to the primary coolant; (4) equilibrium concentrations of various nuclides in primary coolant; (5) various rates of flow, leakage and equipment operation; (6) partition and decontamination factors for radioiodine; (7) decontamination factors for various nuclides and waste streams in demineralizers and evaporators; and (8) hold-up times. Thus, estimating the quantities of radioactivity which may be

though the overall guidelines would be set at the federal level, 50 very different sets of requirements would be possible. Indeed, a state might, under the guise of implementing EPA's effluent guidelines under the FWPCA, attempt to ban nuclear power plants entirely, based on its assumptions regarding fuel performance and plant operation, on the ground that no combination of available equipment provides, in its view, adequate assurance that the FWPCA standards will be met. Moreover, compliance with state interpretations of FWPCA liquid radioactive discharge requirements might force the retention of amounts of radioactive substances within the power plant which would hamper operation in compliance with the NRC's regulations regarding exposures to in-plant employees or increase solid radioactive wastes, raising different considerations of public health and safety which no conceivable construction of the FWPCA would authorize EPA and the states to regulate.

Therefore, state implementation of effluent guidelines for liquid nuclear wastes would completely undermine the goals of the Atomic Energy Act confirmed in *Northern States*. It would prevent unified and comprehensive regulation, would be potentially "overprotective" with respect to one aspect of nuclear power plant operation while

found at any point in a nuclear power plant requires complete understanding of the nuclear fission process, of all of the fluid systems in the nuelear power plant, and of the equipment comprising those systems. Moreover, since the principal means of treating liquid wastes—demineralization in a resin bed, evaporation, or simply drumming the liquid—all yield solid wastes, decreases in liquid nuclear wastes involve increases in quantities of solid wastes which must be shipped to burial sites. *See* Wills, *supra*, at 196-98.

interfering with federal objectives with respect to another, and would in fact constitute "a dual system of licensing and regulation with control exerted by both the states and the federal government," thereby creating "an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Northern States Power Co.* v. *Minnesota*, 447 F.2d 1035, 1154 (8th Cir. 1971), *aff'd*, 405 U.S. 1035 (1972).

The effects of the fragmented, uneven regulation resulting from state administration of the FWPCA on the nation's projected need for nuclear power over the next decade would be disastrous. At the very least, the progression of applications for nuclear power plants through the regulatory process would be delayed while the EPA adopts effluent guidelines for liquid nuclear wastes and the administrative mechanism for each state to process applications under the FWPCA is set up. During this interval, scarce fossil fuels would be consumed. Thereafter, further delays would take place while challenges to the derivation of EPA's effluent guidelines were litigated. Moreover, it is possible that public utilities would refrain from committing to new nuclear power plants until the scope and direction of each state's implementation of the FWPCA could be determined. Some public utilities might forego nuclear plants altogether with consequent higher power costs and adverse effects on conservation of fossil fuels. Others might base their choice of the location for such power plants, in part, on the relative stringency of a particular state's interpretation of the EPA's effluent guidelines for liquid radioactive discharges. The interjection of such an artificial factor into power plant siting decisions would hardly be in the public interest.

B. The Court of Appeals erroneously confined its interpretation of the FWPCA to one section of that Act.

As shown above, the Tenth Circuit ignored the effect of its decision on the regulatory structure established by the FWPCA. Instead, the Court fixed its exclusive attention on the definitional section of the FWPCA and held simply that the "plain meaning" of the words "radioactive materials" within the definition of the term "pollutant" compelled the conclusion that Congress intended EPA to regulate liquid nuclear wastes under the FWPCA. 507 F.2d at 747. There is no maxim of statutory construction which required—or permitted—the court below to take such an unduly narrow view of the congressional policy expressed in the FWPCA. This Court has consistently held that in interpreting a statute, it "will not look merely to a particular clause in which general words may be used, but will take in connection with it the whole statute . . . as indicated by its various provisions, and give to it such a construction as will carry into execution the will of the Legislature". *Kokoszka* v. *Belford*, 417 U.S. 642, 650 (1974), *citing Brown* v. *Duchesne*, 60 U.S. (19 How.) 183, 194 (1857).[26]

Moreover, when all of the provisions of the FWPCA are considered, and construed together with the Atomic Energy Act, it is obvious that the inclusion of the words "radioactive materials" in Section 502(6) does not manifest an intent that EPA duplicate NRC's regulation of

[26] *See also Richards* v. *United States*, 369 U.S. 1, 11 (1962): "a section of a statute should not be read in isolation from the context of the whole Act, and . . . in interpreting legislation, '[the Supreme Court] must not be guided by a single sentence or member of a sentence, but [should] look to provisions of the whole law and to its object and policy' " (citations omitted).

liquid nuclear wastes. Section 511(a) of the FWPCA, 33 U.S.C. §1371(a) (Supp. II, 1972), provides, for example, that the FWPCA "shall not be construed as . . . limiting the authority or functions of any officer or agency of the United States under any other law or regulation not inconsistent with this Act. . . ." As we have shown, however, the Tenth Circuit's interpretation of Section 502(6), 33 U.S.C. §1362(6) (Supp. II, 1972), could substantially affect the ability of the NRC to comprehensively regulate source, by-product and special nuclear material.

The Tenth Circuit dealt simplistically with this problem by asserting that the Atomic Energy Act was "inconsistent" with the FWPCA. 507 F.2d at 748. In so holding, the Tenth Circuit ignored the fact that Congress followed a more far-sighted approach in the FWPCA. It dealt with inconsistent statutory provisions by identifying them specifically, not by amending them by implication. Moreover, when Congress chose to affect laws it considered inconsistent with the FWPCA, it did so in a manner that carried out the policy of Section 101(f) of the FWPCA, 33 U.S.C. §1251(f) (Supp. II, 1972), that "needless duplication" be eliminated. Examples are numerous. Section 402(a)(5), 33 U.S.C. §1342(a)(5), eliminates the authority of the Corps of Engineers to issue permits under Section 13 of the Rivers and Harbors Act of 1899, 30 Stat. 1121, 33 U.S.C. §407 (1970). Section 511(a)(2), 33 U.S.C. §1371(a)(2), limits the Corps' water quality responsibilities under Section 10 of the Rivers and Harbors Act of 1899, 30 Stat. 1121, 33 U.S.C. §403 (1970). Section 511(c)(2), 33 U.S.C.

§1371(c)(2), restricts similar responsibilities of federal licensing agencies under the National Environmental Policy Act ("NEPA"), 83 Stat. 852, 42 U.S.C. §§4321 *et seq.* (1970), and specifically limits the authority of the NRC under NEPA to restrict the discharge of cooling water from nuclear power plants.[27] These provisions indicate that, if Congress had considered the Atomic Energy Act and the comprehensive regulatory program of the NRC to be "inconsistent" with the FWPCA, it would have specifically addressed and resolved this inconsistency in the FWPCA.

Other provisious of the Act also indicate that the Tenth Circuit's interpretation was erroneous. For example, the Act includes numerous provisions that call for coordination with other governmental agencies and instrumentalities having an interest in the matters regulated. But the NRC is never mentioned. Section 402(b)(5), (6), 33 U.S.C. §1342(b)(5), (6), requires that the views of the Corps of Engineers and neighboring states be accorded weight in issuing discharge permits. Section 514, 33 U.S.C. §1373, directs that the "permitting agency under section 402 shall assist the applicant for a permit under such section in coordinating the requirements of this Act with those of

[27]When the FWPCA was passed, the AEC was regulating thermal discharges from nuclear power plants pursuant to its NEPA responsibilities. *Calvert Cliffs' Coord. Comm., Inc.* v. *Atomic Energy Comm'n*, 449 F.2d 1109 (D.C. Cir. 1971). As described by Senator Muskie in the Senate debates, the FWPCA precluded the AEC from such regulation. Committee Print, A Legislative History of the Water Pollution Control Act Amendments of 1972 Together with a Section-by-Section Index, prepared by the Environmental Policy Division of the Congressional Research Service of the Library of Congress, 93d Cong., 1st Sess. (hereinafter, "Leg. Hist."), Vol. I, at 196-99 (1973). *See also* 10 C.F.R. Pt. 51, at 39 Fed. Reg. 26279 (1974).

the appropriate public health agencies." Section 312(b), 33 U.S.C. §1322(b), directs that EPA consult with the Secretary of Transportation prior to promulgating the "Federal standards of performance for marine sanitation devices." Certainly, these provisions indicate that Congress would have expressly required that EPA coordinate its activities with the NRC, the agency expert in regulating nuclear wastes, if Congress had intended that EPA duplicate the regulatory efforts of the NRC. In view of this statutory pattern, it is not reasonable to conclude that Congress intended to eliminate the exclusive nature of NRC's responsibilities under the Atomic Energy Act and establish overlapping regulation by EPA merely by including the words "radioactive materials" in the definition of "pollutant."

Accordingly, if the Tenth Circuit had considered the FWPCA as a whole and examined the interplay between the FWPCA and the Atomic Energy Act as construed in *Northern States*, the unreasonableness of its conclusion would have been apparent. This Court has looked beyond the four corners of specific legislation in an effort to discern congressional intent and harmonize the legislation before it with that intent. *Morton* v. *Mancari*, 417 U.S. 535 (1974); *see also Boys Market, Inc.* v. *Retail Clerks Union*, 398 U.S. 235 (1970).

In these circumstances, only the most specific congressional intent to superimpose another layer of regulation upon that of the NRC should lead a court to order such an inevitably confusing and wasteful result. The Tenth Circuit discerned that apparent intent from its perusal of one section of the statute itself. As we show in the next section of our brief, had the Tenth Circuit analyzed the legislative history of the FWPCA, it would have concluded that such a Congressional intent is wholly lacking. Indeed, the legislative history of the FWPCA strongly supports the exclusion of liquid nuclear wastes from nuclear power plants from the reach of that statute.

IV.

Congress in Adopting the Federal Water Pollution Control Act Amendments of 1972 Evidenced Its Intent Not to Disturb the Responsibility of the Atomic Energy Commission for Comprehensive Control over all Source, By-product and Special Nuclear Materials.

A. Use of legislative history as an aid to statutory construction is appropriate under these circumstances.

The Tenth Circuit predicated its refusal to consider the legislative history of the applicable provisions of the FWPCA on its version of the "plain meaning" rule of statutory construction—where the language of a statute is clear, there is "no need" to resort to the legislative history as an aid to its interpretation. 507 F.2d at 746. In view of the statutory definition of source, by-product and special nuclear material in the Atomic Energy Act and existing regulation of those substances in liquid discharges from nuclear power plants by the AEC, the cryptic inclusion of the words "radioactive materials" in the definition of "pollutant" in the FWPCA can hardly be regarded as a clear expression of Congressional intent. As noted by this Court in *Chemehuevi Tribe of Indians* v. *Federal Power Comm'n*, 95 S. Ct. 1066, 1072 (1975), careful analysis of a statutory phrase may disclose an "ambiguity latent in the seemingly clear language chosen by Congress to define the extent of the Commission's licensing authority."

The "plain meaning" rule is not, and has never been, an exclusionary rule of law which would prevent courts from considering legislative history as an aid to statutory interpretation. As stated by Justice Holmes, this so-called rule is "rather an axiom of experience than a rule of law, and does not preclude consideration of persuasive evidence if it exists." *Boston Sand & Gravel Co.* v. *United States*, 278 U.S. 41, 48 (1928).

The Tenth Circuit failed to consider the circumstances in which legislative history may properly be used in the judicial construction of a statute. First, the legislative history may clarify imprecise statutory terms. *United States* v. *American Trucking Assn's, Inc.*, 310 U.S. 534 (1940); *see also, Chemehuevi Tribe of Indians* v. *Federal Power Comm'n*, 95 S. Ct. 1066 (1975). Second, legislative history may reveal a particular Congressional purpose not manifest on the surface of the statute. *E.g., Cass* v. *United States*, 417 U.S. 72 (1974); *Harrison* v. *Northern Trust Co.*, 317 U.S. 476 (1943). Third, this Court has found it appropriate to resort to legislative history for direction in avoiding results otherwise to be drawn from acts of Congress which would be "extraordinary" or "unreasonable."

> When [the plain meaning of words in a statute] has led to absurd or futile results, however, this Court has looked beyond the words to the purpose of the act. Frequently, however, even when the plain meaning did not produce absurd results but merely an unreasonable one "plainly at variance with the policy of the legislation as a whole" this Court has followed tnat purpose, rather than the literal words.

United States v. *American Trucking Ass'ns, Inc.*, 310 U.S. 534, 543 (1940) (citations omitted); *see also National Labor Relations Board* v. *Allis-Chalmers Mfg. Co.*, 388 U.S. 175, 184 (1967); *Perry* v. *Commerce Loan Co.*, 383 U.S. 392 (1966).

The inclusion of the words "radioactive materials" in the FWPCA cannot be deemed a conclusive expression of congressional will to authorize EPA to regulate liquid radioactive discharges from nuclear power plants in view of the comprehensive regulation of such discharges by the AEC. Section 101(f) of the FWPCA, 33 U.S.C. §1251(f) (Supp. II, 1972), itself specifically declares that the policy of the statute is to prevent "needless duplication and unnecessary delays at all levels of government." It is apparent that each of the factors which justify resort to the legislative history is present in this instance.

The rulings of this Court on which the court below relied to hold that there was "no need" for consideration of legislative history do not prohibit such consideration, but rather explain how the interpretive process is to be performed. As quoted by the Tenth Circuit, 507 F.2d at 747, "the plain words and meaning of a statute cannot be overcome by a legislative history which, through *strained processes of deduction* from events of *wholly ambiguous significance*, may furnish *dubious bases of inference* in every direction." *Gemsco, Inc.* v. *Walling*, 324 U.S. 244, 260 (1945) (emphasis added). That is certainly a valid formulation, but it is simply not relevant to the facts of this case. The legislative history of the FWPCA strongly reflects the consensus of Congress with respect to the intended scope of the term "radioactive materials" as used in the definition of "pollutant". Moreover, since the Congressional purpose is buttressed by the interpretation

already given the language of the statute by the agency charged with its administration, it is particularly important that the courts, in interpreting the Act, not be caught up in "a literal interpretation dogma." *United States* v. *American Trucking Ass'ns, Inc.*, 310 U.S. 534, 544, 549 (1940).

B. Congress clearly intended to except by-product, source, and special nuclear materials already extensively regulated by the NRC from the definition of "pollutant" contained in the FWPCA.

To dismiss the legislative history of the FWPCA as "conflicting and inconclusive," as the Tenth Circuit did, 507 F.2d at 748, is neither a fair comment on Congress' efforts to provide a legislative history that would aid administrative and judicial interpretations of the statute generally, nor does it reflect a careful analysis of the specific legislative history of the statutory phrase at issue here. The House and Senate both held extensive hearings on these Amendments, such hearings beginning early in 1971.[28] Nowhere in the voluminous hearings is there tes-

[28]A partial list of the Hearings is as follows: Hearings on Water Pollution Control Legislation Before the Subcomm. on Air and Water Pollution of the Sen. Comm. on Public Works, 92d Cong., 1st Sess., pts. 1–9 (1971); Hearings on Water Pollution Control Programs Before the Subcomm. on Air and Water Pollution of the Sen. Comm. on Public Works, 92d Cong., 1st Sess. (1971); Hearings on Water Pollution Control Legislation—1971, Before the House Comm. on Public Works, 92d Cong., 1st Sess. (1971); Hearings on Water Pollution Control Legislation—1971, H.R. 11896, H.R. 11895, Before the House Comm. on Public Works, 92d Cong., 1st Sess. (1971); Hearings on Water Pollution Control Legislation—1971 (Proposed Amendments to Existing Legislation) Before the House Comm. on Public Works, 92d Cong., 1st Sess. (1971).

timony regarding the need for EPA regulation of liquid nuclear wastes from nuclear power plants. Indeed, the Petitioner in this case, Russell Train, then head of the Council on Environmental Quality, testified that existing AEC regulation of such discharges from nuclear power plants was rigorous and demanded adherence to "the highest possible standards." 2 Leg. Hist. 1177.

The sponsors of the respective bills which became the FWPCA expressed their understanding that passage of the legislation would not affect the relationship of the Federal Government and the states with respect to regulation of nuclear wastes, and their intention that the FWPCA would neither restrict nor duplicate any of the authority of the AEC over such discharges under the Atomic Energy Act. On the Senate side, this was done by affirming that the FWPCA would not "in any way affect" the AEC's authority over radioactive materials under the Atomic Energy Act.[29] The House sponsors further ex-

[29]Mr. PASTORE . . . I also note that the definition of 'pollutant' contained in section 502(f) of the bill, on page 164, includes the words 'radioactive materials.'

My question is this: Does this measure that has been reported by the committee in any way affect the existing law, that is, the existing Atomic Energy Act of 1954, insofar as the regulatory powers of the AEC are concerned with reference to radioactive material?

MR. MUSKIE. It does not; and it is not the intent of this act to affect the 1954 legislation.

MR. PASTORE. In other words, this bill does not change that feature of the Atomic Energy Act in any regard?

MR. MUSKIE. That is correct.

2 Leg. Hist. 1265–66. This exchange between Senators Muskie and Pastore is particularly significant because Senator Pastore was Vice-Chairman of the Joint Committee on Atomic Energy and Senator Muskie was the principal sponsor of the bill in the Senate.

plained the intent by declaring that "radioactive materials" as used in the definition of "pollutant" would exclude source, by-product and special nuclear materials as regulated by the AEC. 1 Leg. Hist. 588-89, 818 (Public Works Comm. Report and debate). As reported by the House managers, the Conference Committee agreed with the House interpretation of the meaning of the term "radioactive materials". 1 Leg. Hist. 226-27.

The Senate bill, S. 2770, was considered and passed while the House Committee on Public Works was still holding hearings on its version of the 1972 Amendments. S. 2770 defined "pollutant" in Section 502(f) as follows:

> The term 'pollutant' means, but is not limited to, dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat. . . .

Although the Senate Committee did not explain the meaning of "radioactive materials" within the definition of "pollutant", the House Report on H.R. 11896, which contained essentially the same definition of "pollutant", carefully defined the words "radioactive materials."

> The term "pollutant" as defined in the bill includes radioactive materials. *These materials are those not encompassed in the definition of source, by-product, or special nuclear materials as defined by the Atomic Energy Act of 1954, as amended, and regulated pursuant to that Act.* 'Radioactive materials' encompassed by this bill are those beyond the jurisdiction of the Atomic Energy Commission. Examples of radioactive material not covered by the Atomic Energy Act, and therefore, included within the term 'pollutant' are radium and accelerator produced isotopes.

1 Leg. Hist. 818 (emphasis added).

Congressman Holifield, Chairman of the Joint Committee on Atomic Energy, requested further assurance as to the meaning of the passage quoted above during the House debate on H.R. 11896. He asked as follows:

> Is that a true and clear definition of the intent of the Committee in the utilization of the words "radioactive materials"?
>
> Mr. JONES of Alabama. The gentleman is correct. That was the intent. The gentleman has just read from page 131 of the report, and that is our specific intention, as I understand.
>
> * * *
>
> Mr. HARSHA: I will respond in the affirmative to that question. That is definitely what we mean. As I said earlier in the debate on the Wolff amendment, we intended to leave the jurisdiction of radioactive material that came within the Atomic Energy Act up to the Atomic Energy Commission. The language applies only to everything outside the jurisdiction of AEC. That is definitely the intent of the wording of the bill and the intent of the committee.

1 Leg. Hist. 588.[30]

Significantly, the House rejected the only attempt to extend the FWPCA to control of liquid nuclear wastes. The Wolff Amendment was intended to amend Section 510 of the House bill to give the states the right "with respect to radioactive materials and thermal discharges, to adopt or enforce any standard or limitation respecting the release of radioactive materials and thermal discharges into water" which was at least as stringent as the federal standards or limitations. 1 Leg. Hist. 542. The purpose of this amendment was to overrule the

[30]Congressmen Jones and Harsha were among the managers of the bill.

District Court and Court of Appeals decisions in the *Northern States* case.

Congressman Wolff recognized that H.R. 11896 without his proposed amendment did not disturb the AEC's exclusive jurisdiction over source, by-product, and special nuclear materials. He stated that:

> It does seem strange to me, though, that the bill fails to prohibit the routine discharge of radioactive wastes from nuclear powerplants into the water. Our amendment will give the States a voice in deciding what kinds and amounts of such radioactive wastes may be discharged into their waters.

1 Leg. Hist. 544.

Congressman McCormack spoke in opposition to the Wolff amendment:

> I would like to conclude by saying that it is obvious from the report by the House Committee on Public Works for this bill and from the committee report from the other body that this bill does not impact directly upon the Atomic Energy Act of 1954. This bill applies only to radioactive materials not covered by the Atomic Energy Act of 1954 and as such the amendment is not relevant to this bill at all.

1 Leg. Hist. 551.

The amendment was defeated, 106 to 36. 1 Leg. Hist. 557.

The Conference version of the 1972 Amendments included the phrase "radioactive materials" in the definition of "pollutant". 1 Leg. Hist. 326–27. Undoubtedly because the House and Senate bills were not different in respect to the basic definition of pollutant as including "radioactive materials", the Conference report, which discusses

the resolution of differences in the two bills, adds nothing further to the legislative history of this section. The House debate on the Conference bill, however, contains an exchange of views which adds further support to the position that "radioactive materials" does not include source, by-product, and special nuclear materials regulated by the AEC.

Congressman Anderson of Illinois, a member of the Joint Committee on Atomic Energy, discussed the definition of "pollutant":

> Mr. Speaker, I note that pollutant is defined in Section 502(6) so as to include radioactive materials. This [was] also true of both S.2270 as passed by the Senate and the House so there has been no change in this respect. S.2770 as passed by the Senate did not amend the Atomic Energy Act as interpreted in Northern States Power against Minnesota and as affirmed by the Supreme Court with respect to state authority over nuclear materials and facilities ... the Conferree's statement does not indicate that any change in this matter is intended—indeed Section 101(f), declaring a national policy to prevent needless duplication and unnecessary delays at all levels of government, reinforces the earlier House and Senate actions on this matter. Nevertheless I should like to confirm my understanding that the Bill as reported by the conferrees is not intended to change the careful division of authority between the States and the Federal Government over nuclear materials and facilities under the Atomic Energy Act. ...

1 Leg. Hist. 226.

Congressman Harsha, the ranking Republican member of the Committee on Public Works, and one of the managers of the bill, responded as follows:

The gentleman is quite correct.

* * *

I can say to the gentleman from Illinois that the managers in no way detracted from the intent of the language in H.R. 11896. I also note that the Committee on Public Works in its report on H.R. 11896 stated on page 131 that the term "pollutant" as defined in the bill includes "radioactive materials." These materials are not those encompassed in the definition of source, byproduct, or special nuclear materials as defined by the Atomic Energy Act of 1954, as amended, and regulated pursuant to that act. "Radioactive materials" encompassed by this bill are those beyond the jurisdiction of the Atomic Energy Commission. . . . This language adequately reflects the intent of the managers of the conference report.

1 Leg. Hist. 226-27. Congressman Jones of Alabama, the Chairman of the Subcommittee and a member of the Conference Committee, was asked by Mr. Anderson whether his understanding on these matters was the same. Referring to Mr. Harsha's comments, he stated, "I am totally in agreement with his explanation and his understanding of what is intended in this conference report." 1 Leg. Hist. 229.

The Conference bill subsequently became the FWPCA, thus extending into law the consensus of the Congress that "radioactive materials" already regulated by the AEC were to be excluded from EPA's mandate. To find, as the court below has done, that the legislative history of FWPCA should be labeled "conflicting and inconclusive" — and be ignored, in any event—is simply incorrect.

V.

EPA's Interpretation of FWPCA Should Be Given Great Weight by This Court.

In the determination which underlies this case, EPA recognized that it is without statutory jurisdiction to regulate discharges of source, by-product and special nuclear materials.[31] This determination merits great weight by the courts since "it involves a contemporaneous construction of the Act by the officials charged with the responsibility of setting its machinery in motion." *Chemeheuvi Tribe of Indians* v. *Federal Power Comm'n*, 95 S.Ct. 1066, 1075 (1975). As in *Chemeheuvi*, particular weight must be given since the implementing agency recognized the appropriateness of a limitation on its powers, rather than attempting to extend those powers.

The necessity of giving weight to the EPA determinations is particularly apparent in view of the broad and

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[31]In its regulations establishing the permit program under Section 402 of the FWPCA, 33 U.S.C. §1342 (Supp. II, 1972), EPA made the following determination:

> COMMENT.—The legislative history of the [FWPCA] reflects that the term 'radioactive' materials' as included within the definition of 'pollutant' in section 502 of the Act covers only radiactive materials which are not encompassed in the definition of source, by-product, or special nuclear materials as defined by the Atomic Energy Act of 1954, as amended, and regulated pursuant to the latter Act. Examples of radioactive materials not covered by the Atomic Energy Act and, therefore, included within the term 'pollutant' are radium and accelerator produced isotopes. (H.R.Rep. 92-911, 92d Cong.2d Sess., 131, March 11, 1972; 117 Cong.Rec. 17401, daily ed., November 2, 1971; 118 Cong.Rec. 9115, daily ed., October 4, 1972.)

40 C.F.R. §125.1(y) (1974).

complex matters which are the subject of its mandate and of the opportunities that mandate entails for frequent collisions with the tasks of other agencies. Thus, in approving an EPA interpretation under the Clean Air Act, 77 Stat. 392, as amended, 42 U.S.C. §§1857 *et seq.* (1970), this court has recently stated in *Train* v. *Natural Resources Defense Council, Inc.*, 95 S. Ct. 1470, 1485 (1975):

> We therefore conclude that the Agency's interpretation . . . was "correct," to the extent that it can be said with complete assurance that any particular interpretation of a complex statute such as this is the "correct" one. Given this conclusion, as well as the facts that the Agency is charged with administration of the Act, and that there has undoubtedly been reliance upon its interpretation by the States and other parties affected by the Act, we have no doubt whatever that its construction was sufficiently reasonable to preclude the Court of Appeals from substituting its judgment for that of the Agency.

While the EPA's administrative interpretations of the FWPCA have not been extensively reviewed in court to date, the holdings under the Act have generally reflected deference to the EPA in interpreting its mandate. *E.g.*, *Natural Resources Defense Council, Inc.* v. *Train*, 510 F.2d 692, 706 (D.C. Cir. 1974).

The correctness of EPA's disclaimer of jurisdiction over liquid nuclear wastes pursuant to the FWPCA is further demonstrated by the fact that, although Congress has reviewed both the FWPCA and the Atomic Energy Act on several occasions since 1972, it has never expressed disagreement with EPA's interpretation of its lack of authority over such discharge. Thus, in oversight hearings conducted on the administration of the FWPCA,

notably including hearings of June 26, 1974, which focused directly on the steam electric power generating category, no question or challenge was raised with respect to EPA's interpretation of the definition of "pollutant" in the FWPCA. Hearings on the Implementation of the Federal Water Pollution Control Act Before the Subcomm. on Investigations and Review of the House Comm. on Public Works, 93d Cong., 2d Sess. (1974). Also in 1974, Congress considered the regulatory responsibilities of the AEC. The Energy Reorganization Act of 1974, 88 Stat. 1233, 42 U.S.C.A. §§5801 *et seq.* (Supp. Feb., 1975), apportioned the functions of the AEC between two agencies, NRC and the Energy Research and Development Administration. One of the express purposes of the legislation was to "upgrade the regulation of nuclear power" S. Rep. No. 93-980, 93d Cong., 2d Sess. 1 (1974). It was anticipated that the NRC would succeed to "all the licensing and related regulatory functions of the AEC." *Id.* at 57. No mention was made by Congress of any concurrent regulatory jurisdiction over liquid nuclear wastes by EPA, even though the FWPCA had been in force for nearly two years and EPA was in the process of issuing effluent guidelines for power plants which did not deal with source, by-product and special nuclear materials in accordance with its interpretation of its jurisdiction under the FWPCA. 39 Fed. Reg. 8293 (1974); *see* 39 Fed. Reg. 36185 (1974).

The Tenth Circuit rendered lip service to its own version of the rule that the construction given a statute by the agency entrusted with its administration is "to be given weight," but then declined to accord any authoritative weight to EPA's interpretation of the FWPCA due

to the Court's asserted fear of "thwarting the will of Congress." 507 F. 2d at 748. This falls far short of the "great weight" consistently accorded by this Court to administrative interpretations of regulatory mandates:

> The [two Federal agencies with regulatory authority over employees in the affected industry] have both interpreted §204(a) as relating solely to safety of operation. In any case such interpretations are entitled to great weight. This is peculiarly true here where the interpretations involve "contemporaneous construction of a statute by the men charged with the responsibility of setting its machinery in motion, of making the parts work efficiently and smoothly while they are yet untried and new."

United States v. *American Trucking Ass'ns, Inc.*, 310 U.S. 534, 549 (1940) (citations omitted); *accord, Zuber* v. *Allen*, 396 U.S. 168 (1969); *Udall* v. *Tallman*, 380 U.S. 1, 16–18 (1965).

Furthermore, EPA's disclaimer of jurisdiction over discharges of source, by-product and special nuclear materials does not stand alone. The AEC entered into a Memorandum of Understanding with EPA in which AEC agreed to "take appropriate action to assure that AEC-licensed facilities are operated in such a manner that routine radioactive discharges therefrom do not exceed generally applicable environmental standards established by EPA. . . ." AEC-EPA Memorandum of Understanding with Respect to AEC-Licensed Facilities, 38 Fed. Reg. 24936 (Sept. 11, 1973); *see also* Memorandum of Understanding With Respect to AEC Facilities, 38 Fed. Reg. 32965 (Nov. 29, 1973). The NRC has followed the AEC action in this respect. 40 Fed. Reg. 19439, n. 3 (1975).

These agreements are in accord with the delineation of the respective roles of the EPA and the AEC which occurred when EPA was established. Reorganization Plan No. 3 of 1970, 84 Stat. 2086, 42 U.S.C. §4321 (1970), which established the EPA, transferred to it the duties of the Federal Radiation Council,[32] and the duties of the AEC's Division of Radiation Protection Standards, to the extent that the Division's functions—

> consist of establishing generally applicable environmental standards for the protection of the general environment from radioactive material. As used herein, standards mean limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.

Pursuant to this delineation of its authority, EPA has for several years been considering the adequacy of existing radiation standards and has recently proposed further environmental standards. On May 29, 1975, EPA proposed "Environmental Radiation Protection Standards for Nuclear Power Operation" pursuant to its authority under the Atomic Energy Act and Reorganization Plan. No. 3 of 1970. 40 Fed. Reg. 23419 (1975). These proposed standards would apply to "radiation doses received by members of the public in the general environment . . . as the result of operations which are part of a nuclear fuel cycle."

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[32]The Council has the statutory purpose to "advise the President with respect to radiation matters, directly or indirectly affecting health, including guidance for all Federal agencies in the formulation of radiation standards." Atomic Energy Act of 1954, as amended, Section 274(h), 73 Stat. 688, 42 U.S.C. §2021(h) (1970).

Id., §190.01 at 23424. The standards, to be enforced by the NRC through its licenses, permits, and other requirements applying to individual facilities, supplement existing EPA environmental standards with respect to permissible exposure by imposing lower limits where practicable and by imposing specific limits to control environmental buildups of plutonium, tritium and krypton.

In this context, the unique importance of the EPA determination that liquid nuclear wastes are not subject to the FWPCA becomes manifest. Taken together with the NRC's recognition of EPA's general standard-setting authority, the EPA determination creates a workable relationship between two agencies which implements the delineation contemplated in their origins, prevents duplication of effort and allows each an effective role. Thus, by disclaiming jurisdiction over discharges of source, by-product and special nuclear materials, EPA did not abandon a role with respect to environmental levels of radiation. EPA simply recognized, as Congress intended, that NRC can best implement EPA's general environmental standards as part of its coherent regulatory structure and that no public benefit could possibly be derived from EPA's intervention with respect to liquid nuclear wastes.

CONCLUSION

For the foregoing reasons, the opinion and order of the Tenth Circuit should be reversed.

Respectfully submitted,

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APPENDIX A

Utility	Customers in Service Territory[1]	Current % of Generating Capacity Which Utilizes Nuclear Energy	% of Generating Capacity Which Will Utilize Nuclear Energy in 1985
Boston Edison Company.....	594,000	22	38
Carolina Power & Light Company.....	648,000	11.8	50
Commonwealth Edison Company.....	2,729,000	33	43

Number and Capacity of Nuclear Plants With Operating Licenses[1]		Number, Capacity and Anticipated Service Date of Nuclear Plants Which Have Construction Permits or Are the Subject of Construction Permit Applications[1]		
Plant	Kilowatts Electrical (in thousands)	Plant	Kilowatts Electrical (in thousands)	Date
Pilgrim 1	670	Pilgrim 2	1180	1982
Yankee Rowe	175			
Connecticut Yankee	575			
H. B. Robinson 2	665	Brunswick 1	821	1976
Brunswick 2	821	Harris 1	900	1981
		Harris 2	900	1982
		Harris 3	900	1983
		Harris 4	900	1984
Dresden 1	200	LaSalle 1	1078	1978
Dresden 2	800	LaSalle 2	1078	1979
Dresden 3	800	Byron 1	1120	1980
Quad Cities 1	800	Byron 2	1120	1981
Quad Cities 2	800	Braidwood 1	1120	1982
Zion 1	1040	Braidwood 2	1120	1982
Zion 2	1040			

To the Honorable, the Chief Justice of the United States and the Associate Justices of the Supreme Court of the United States:

Now comes Michael S. Baram, Dr. Eric Petraske, and the Environmental Law Society of Boston University School of Law, on behalf of themselves, and respectfully move this Court, pursuant to Rule 42.3 of the Rules of this Court, for leave to file the accompanying brief in this case amicus curiae, in order to maintain their interests in environmental health, and for the reasons set forth below.

Messrs. Baram, Petraske and the Environmental Law Society have substantial interests in this case:

(1) their health and welfare, which will suffer increased risk of adverse health effects from low-level ionizing radiation emissions in the effluent discharge from nuclear power plants, unless such discharges are regulated in the manner as determined by Congress to be necessary to protect environmental health by the appropriate environmental agency;

(2) the primary objective of said applicants for amicus curiae status to achieve and maintain environmental quality at levels necessary to ensure the health of present and future generations;

(3) their expertise on radiation rule-making, which can help the Court to a fuller understanding of the complex issues underlying this case.

This petition is presented to the Court to ensure that the Court will give full consideration to the environmental health consequences of rule making on radioactive effluents from nuclear power plants by the Environmental Protection Agency and the Nuclear Regulatory Commission, as such consequences have been considered and acted on by

Utility	Customers in Service Territory[1]	Current % of Generating Capacity Which Utilizes Nuclear Energy	% of Generating Capacity Which Will Utilize Nuclear Energy in 1985
Consolidated Edison Company of New York, Inc.	2,800,000	10.8	19.3[3]
The Detroit Edison Company.	1,651,402	0	26.5
Illinois Power Company.....	471,490	0	37
Louisiana Power & Light Company.....	399,342	0	21
Niagara-Mohawk Power Corporation.....	1,278,000	9	18
Northern States Power Company.....	948,192	31.2	28.4

Number and Capacity of Nuclear Plants With Operating Licenses[2]		Number, Capacity and Anticipated Service Date of Nuclear Plants Which Have Construction Permits or Are the Subject of Construction Permit Applications[2]		
Plant	Kilowatts Electrical (in thousands)	Plant	Kilowatts Electrical (in thousands)	Date
Indian Point 1	257	Indian Point 3	873	1976
Indian Point 2	864			
—		Fermi 2	1150	1980–1981
		Greenwood 2	1207	1984
		Greenwood 3	1207	1986
—		Clinton 1	950	1981
		Clinton 2	950	1983
—		Waterford 3	1165	1981
Nine Mile Point 1	610	Nine Mile Point 2	1100	1982
Monticello 1	538	Tyrone 1	1150	1985
Prairie Island 1	520			
Prairie Island 2	520			

Congress in providing authority to these agencies. Further, this petition is presented to the Court to ensure that the relationship between general environmental levels and discharge levels for radioactive materials is ascertained and used in the determination of limits on radioactive effluents from nuclear power plants, for the protection of environmental health.

On the basis of our expertise in the technical, analytical and legal aspects of regulating radioactive effluent discharges from nuclear power plants, we have reached conclusions on the merits of this case, and offer our assistance to the Court.

Michael S. Baram, attorney for the Environmental Law Society, is an Associate Professor at the Massachusetts Institute of Technology. He is Vice Chairman of the American Bar Association's Committee on Environmental Law (General Practice Section), Chairman of the American Bar Association's Committee on Technology Assessment, is a member of two committees of the National Academy of Sciences (including the Committee on Biological Effects of Ionizing Radiation), and special advisor to a Committee of the National Academy of Engineering. He is a Lecturer in Law at Boston University School of Law, and counsel to the law firm of Bracken and Selig.

The Environmental Law Society of Boston University School of Law is a student association with expertise in environmental control and energy programs. Dr. Eric Petraske, a member of the Society, holds a doctorate in nuclear physics, has held post-doctoral and faculty appointments in this field, and is now a third-year law student at Boston University School of Law. He has worked closely with Professor Baram on various studies relating to nuclear power regulation.

Messrs. Baram and Petraske have been extensively

Utility	Customers in Service Territory[1]	Current % of Generating Capacity Which Utilizes Nuclear Energy	% of Generating Capacity Which Will Utilize Nuclear Energy in 1985
Omaha Public Power District.	192,766	32.2	51.5
Power Authority of the State of New York.....	50[4]	16	31[3]
Rochester Gas & Electric Corporation.....	272,195	47	54
Southern California Edison Company.....	2,700,000	3	12
Union Electric Company.....	905,000	0	21
Wisconsin Electric Power Company.....	731,834	27	33.3

Number and Capacity of Nuclear Plants With Operating Licenses[2]		Number, Capacity and Anticipated Service Date of Nuclear Plants Which Have Construction Permits or Are the Subject of Construction Permit Applications[2]		
Plant	Kilowatts Electrical (in thousands)	Plant	Kilowatts Electrical (in thousands)	Date
Ft. Calhoun 1	455	Ft. Calhoun 2	1150	1983
Fitzpatrick	821	Greene County	1300	1982–1983
Ginna 1	470	Sterling	1150	1982
San Onofre 1	430	San Onofre 2	1100	1980
		San Onofre 3	1100	1981
—		Callaway 1	1150	1981
		Callaway 2	1150	1983
Pt. Beach 1	485	Koshkonong 1	900	1983
Pt. Beach 2	485	Koshkonong 2	900	1984

involved in research on standard-setting and other aspects of regulating ionizing radiation from nuclear power sources. They have developed expertise on the several regulatory approaches employed to control ionizing radiation; on the authority of the Nuclear Regulatory Commission, the Environmental Protection Agency, and the States; and on the analytical methods employed by regulatory authorities for standard-setting and other decision-making.

For the above reasons, and on the basis of the expertise indicated, we petition this Court to enable Messrs. Baram and Petraske, and the Environmental Law Society of Boston University School of Law to contribute significantly to the resolution of the issue of Congressional intent in this case, and thereby request permission to file our brief amicus curiae.

Respectfully submitted,

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September 22, 1975

* Motion for admission to practice before the Supreme Court of the United States granted on September 19, 1975.

Utility	Customers in Service Territory[1]	Current % of Generating Capacity Which Utilizes Nuclear Energy	% of Generating Capacity Which Will Utilize Nuclear Energy in 1985
The New England area:[5]			
Central Maine Power Company	340,000	31	39
The Connecticut Light and Power Company	536,000	21	40
The Hartford Electric Light Company	282,000	21	40
Maine Yankee Atomic Power Company			
New England Power Company	44[4]	8.7	37
Northeast Nuclear Energy Company			
Public Service Company of New Hampshire	250,000	9.2	57.2
Vermont Yankee Nuclear Power Corporation			
Western Massachusetts Electric Company	161,000	21	40
Yankee Atomic Electric Company			

Number and Capacity of Nuclear Plants With Operating Licenses[2]		Number, Capacity and Anticipated Service Date of Nuclear Plants Which Have Construction Permits or Are the Subject of Construction Permit Applications[3]		
Plant	Kilowatts Electrical (in thousands)	Plant	Kilowatts Electrical (in thousands)	Date
Yankee Rowe	175	Millstone 2	830	1975
Vermont Yankee	540	Millstone 3	1,150	1979
Connecticut Yankee	575	Montague 1	1,150	1986
Millstone 1	660	Montague 2	1,150	1988
Maine Yankee	855	Pilgrim 2	1,180	1982
		Seabrooke 1	1,150	1980
		Seabrooke 2	1,150	1982

Footnotes to Appendix A

[1]The population served by each utility is a considerably larger number. For example, the population in the service territory of Commonwealth Edison Company is approximately 8,000,000.

[2]Some of the nuclear plants listed are partially owned by other companies.

[3]This number includes Indian Point 3.

[4]These companies are wholesalers of power.

[5]The Northeast Nuclear Energy Company, Maine Yankee Atomic Power Company, Vermont Yankee Nuclear Power Corporation and Yankee Atomic Electric Company are generating companies which construct and operate nuclear power plants for some of the other utilities listed in this group. One or more of the companies in this group has an interest in each of the plants listed.